



SERIES W48
SERIES WS48
SERIES WG48
SERIES WSA48
- PUSHBUTTON SWITCHES



Series W48

KEY FEATURES

- Size: 12mm
- SPST-NO-DB
- Solder /PC Terminal & wireleads
- Snap Action: Momentary / Maintained
- Operation temperature: -40 ~ 85°C
- Metal, Plastic bezel/ housing
- IP67 water proof
- Square and Round versions available

APPLICATIONS

- Office equipment
- Medical equipment
- Industrial machinery
- Outdoor controls
- Mass transportation
- Food processing equipment

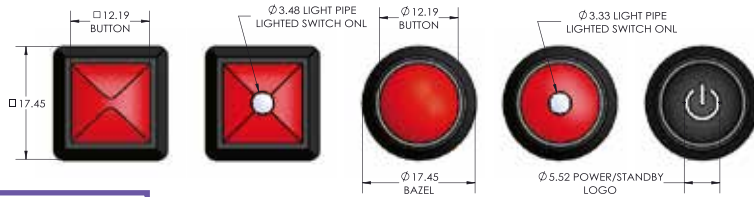
ORDERING INFORMATION

W 48 - - - - - -

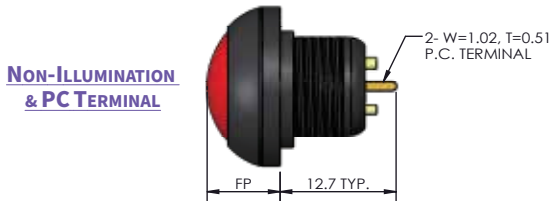
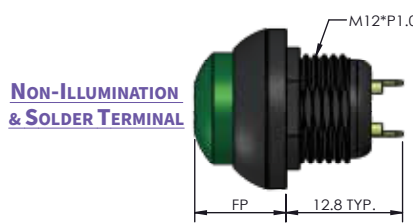
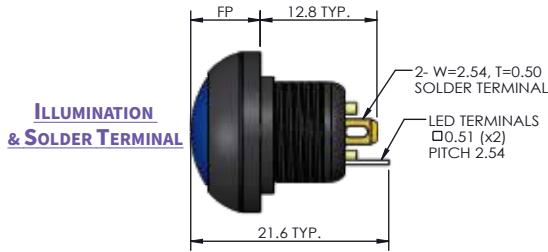
Series:	Switch Function / Termination:	Plastic Bezel Type:	LED Color:	Button Color:	Mounting Type:	Voltage Resistor:
Blank Gold Contact IP67	1 Momentary, Solder	RB Round, Black	N None	RD Red	B Bushing	If Blank: Note*
S Silver Contact IP67	2 Maintained, Solder	SB Square, Black	R Red	GR Green	S Snap-Fit	05 5V Forward
G Silver Contact IP67/2A	5 Momentary, PC	Metal Bezel Type:	G Green	BK Black		12 12V Forward**
	6 Maintained, PC	RMB Round, Matte Black	Y Yellow	BL Blue		24 24V Forward**
	A Momentary, Wire Leads	RMG Round, Glossy Black	A Amber	YL Yellow		
	B Maintained, Wire Leads	RMS Round, Velour Chrome	B Blue	OR Orange		
SA Silver Contact IP67/5A	1 Momentary, Solder	RMC Round, Bright Chrome	W White	WH White		
	2 Maintained, Solder			PK Standby Symbol		
	A Momentary, NO/NO Wireleads	Metal Bezel only for Momentary.		High Button Color:		
	B Maintained, NO/NO Wireleads			HRD Red		
	C Momentary, NC/NC Wireleads			HGR Green		
	D Maintained, NC/NC Wireleads			HBK Black		
	E Momentary, NC/NO Wireleads			HBL Blue		
	F Maintained / NC/NO Wireleads			HYL Yellow		
				HOR Orange		
				HWH White		

Note:
 * Current limiting resistor is required to limit LED forward current to 20mA.(not included)
 **12 and 24V resistors are available with wirelead versions only.

SERIES W48 - PUSHBUTTON SWITCHES

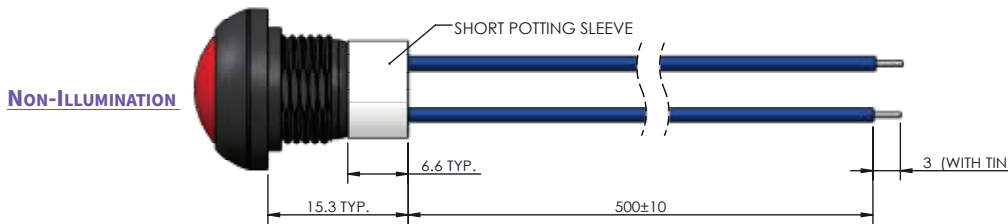
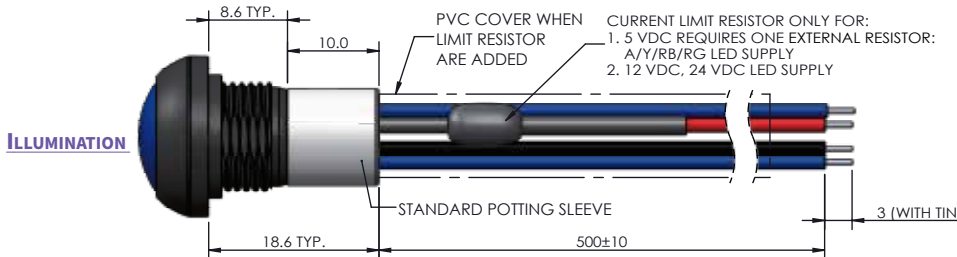


48 SERIES



SWITCH ACTION	BUTTON TYPE	FP (mm)
MOMENTARY	NON-ILLUMINATION	8.0±0.5
	ILLUMINATION LIGHT PIPE BUTTON	7.6±0.5
	NON-ILLUMINATION HIGH BUTTON	9.9±0.5

WIRELEADS



	BUSHING MOUNT TYPE	SNAP-IN MOUNT TYPE
RECOMMENDED PANEL CUT-OUT		
PANEL THICKNESS	0.020~0.118" [0.5~3.0 mm]	0.051~0.118" [1.5~3.0 mm]
NUT TORQUE FORCE	Max. 5.2 lb-in [6 kgf-cm]	

MECHANICAL CHARACTERISTICS

- **Switch Circuitry:** SPST-NO-DB (Form X)
- **Button Travel (Nominal):** 0.090 inches [2.30mm]
- **Operating Force (Nominal):** 3N [306g]
- **Contact Bounce (Nominal):** 1ms
- **Contacts Material:** Gold Plated
- **Panel Thickness:**
Bushing Mount: 0.020" - 0.118" [0.5 - 3.0mm]
Snap-In Mount: 0.051" - 0.118" [1.5 - 3.0mm]
- **Nut Torque Force:** Max 5.2 lb-in [6 kgf-cm]
- **Current Ratings (Nominal):**
48 (Momentary)
 250mA @ 12VDC, 100k Cycles
 150mA @ 28VDC, 150k Cycles
 100mA @ 48VDC, 100k Cycles
 10mA @ 12VDC, 1 Million Cycles
48 (Maintained)
 50K Cycles Nominal

ENVIROMENTAL SPECIFICATIONS

- **Operating Temperature:** -40°F to +185°F (-40°C to +85°C)
- **Water Proof:** IP67 (Front Panel)

ELECTRICAL SPECIFICATIONS

- **Dielectric Strength:** 1,000VAC
- **Insulation Resistance:** 1G Ω
- **Contacts Resistance:** 50 mΩ max. (Non-Wirelead) 250 mΩ max. (Wirelead)
- **Wireleads:** UL Style 1007 26 AWG, Stranded

MECHANICAL CHARACTERISTICS

- **Switch Circuitry:**
SPST-NO-DB (Form X)
- **Button Travel (Nominal):**
0.090 inches [2.30mm]
- **Operating Force (Nominal):**
3N [306g]
- **Contact Bounce (Nominal):**
1ms
- **Contacts Material:**
Silver
- **Panel Thickness:**
Bushing Mount:
0.020" - 0.118" [0.5 - 3.0mm]
Snap-In Mount:
0.051" - 0.118" [1.5 - 3.0mm]
- **Nut Torque Force:**
Max 5.2 lb-in [6 kgf-cm]
- **Current Ratings (Nominal):**
G48(Momentary)
2A @ 24VDC, 40k Cycles
2A @ 250VAC, 40k Cycles
G48 (Maintained)
2A @ 24VDC, 40k Cycles
2A @ 250VAC, 40k Cycles
SA48
5A @ 28VDC, 25k Cycles
5A @ 125/250VAC, 25k Cycles

ENVIROMENTAL SPECIFICATIONS

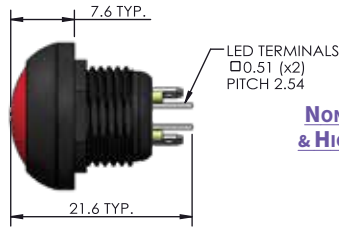
- **Operating Temperature:**
-40°F to +185°F (-40°C to +85°C)
- **Water Proof:**
IP67 (Front Panel)

ELECTRICAL SPECIFICATIONS

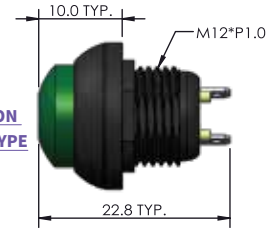
- **Dielectric Strength:**
1,000VAC
- **Insulation Resistance:**
1G Ω
- **Contacts Resistance:**
50 mΩ max. (Non-Wirelead)
250 mΩ max. (Wirelead)
- **Wireleads:**
UL Style 1007
26 AWG, Stranded

G48 SERIES

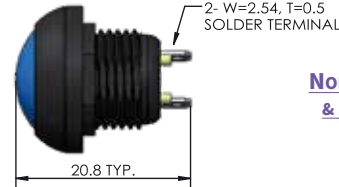
ILLUMINATION & BUSHING TYPE



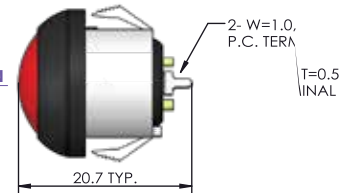
NON-ILLUMINATION & HIGH BUTTON TYPE



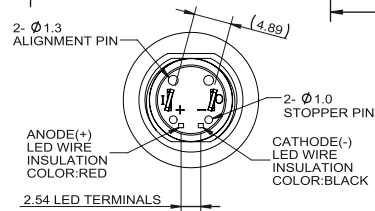
NON-ILLUMINATION & BUSHING TYPE



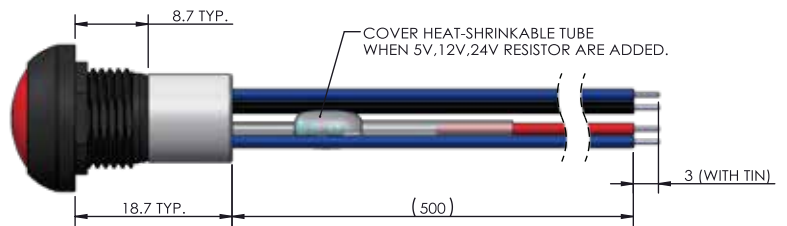
NON-ILLUMINATION & SNAP FIT TYPE



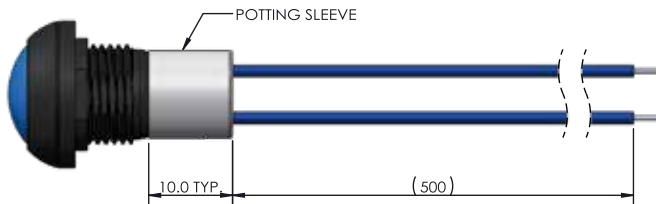
WIRELEADS



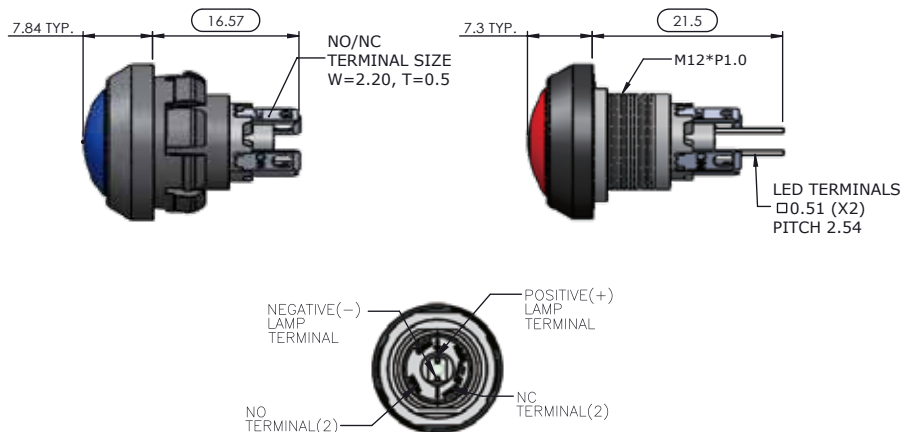
ILLUMINATION



NON-ILLUMINATION



SA48 SERIES

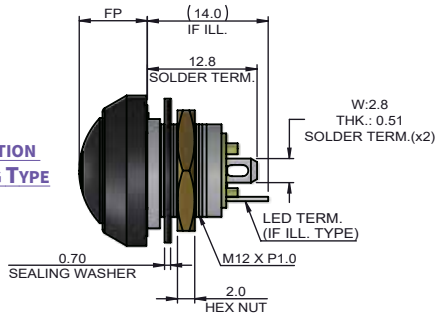


SERIES W48 - PUSHBUTTON SWITCHES

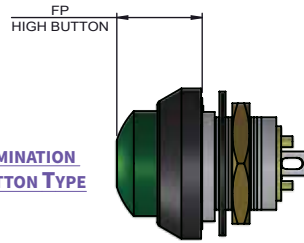


S48 SERIES

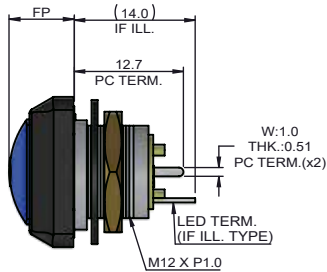
ILLUMINATION & BUSHING TYPE



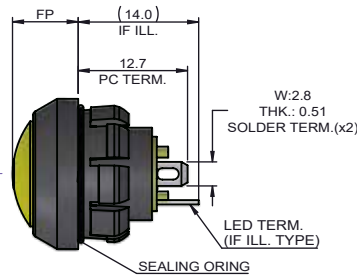
NON-ILLUMINATION & HIGH BUTTON TYPE



ILLUMINATION & BUSHING TYPE



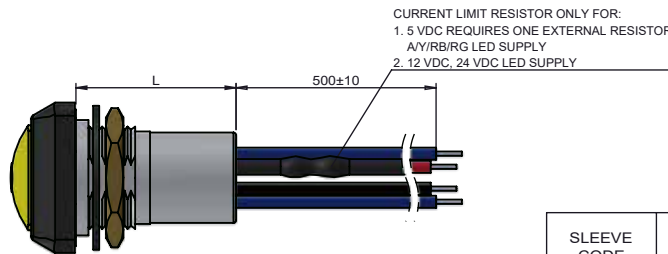
NON-ILLUMINATION & SNAP FIT TYPE



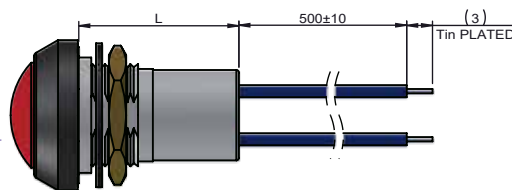
SWITCH ACTION	BUTTON TYPE	FP(mm)	SWITCH ACTION	BUTTON TYPE	FP(mm)
MOMENTARY	NON-ILLUMINATION	8.0±0.5	MAINTAINED	NON-ILLUMINATION	6.5±0.5
	ILLUMINATION LIGHT PIPE BUTTON	7.6±0.5		ILLUMINATION LIGHT PIPE BUTTON	6.0±0.5
	NON-ILLUMINATION HIGH BUTTON	9.9±0.5		NON-ILLUMINATION HIGH BUTTON	8.4±0.5

WIRELEADS

ILLUMINATION



NON-ILLUMINATION



SLEEVE CODE	L(mm)
IF BLANCK (STANDARD)	18.6
D (SHORT)	15.2

MECHANICAL CHARACTERISTICS

- Switch Circuitry: SPST-NO-DB (Form X)
- Button Travel (Nominal): 0.090 inches [2.30mm]
- Operating Force (Nominal): 3N [306g]
- Contact Bounce (Nominal): 1ms
- Contacts Material: Silver
- Panel Thickness:
 - Bushing Mount: 0.020" - 0.118" [0.5 - 3.0mm]
 - Snap-In Mount: 0.051" - 0.118" [1.5 - 3.0mm]
- Nut Torque Force: Max 5.2 lb-in [6 kgf-cm]
- Current Ratings (Nominal):
 - S48 (Momentary) 10mA @ 12VDC, 200k Cycles

S48 (Maintained)
20k Cycles Nominal

ENVIROMENTAL SPECIFICATIONS

- Operating Temperature: -40°F to +185°F (-40°C to +85°C)
- Water Proof: IP67 (Front Panel)

ELECTRICAL SPECIFICATIONS

- Dielectric Strength: 1,000VAC
- Insulation Resistance: 1G Ω
- Contacts Resistance: 50 mΩ max. (Non-Wirelead) 250 mΩ max. (Wirelead)
- Wireleads: UL Style 1007 26 AWG, Stranded